IN THE CLAIMS:

Please AMEND claims 1, 15 and 30 in accordance with the following:

1. (CURRENTLY AMENDED) A method of managing a network comprising the steps of:

polling resources of the network to gather real-time status information about the network;

evaluating the gathered real-time status information; and

based on the gathered real-time status information, predicting whether a future performance problem is to be encountered within the network.

2. (ORIGINAL) The method of claim 1 further comprising the step of:

determining an appropriate action for preventing said performance problem from occurring.

3. (PREVIOUSLY PRESENTED) The method of claim 2 wherein said determining step includes determining said appropriate action from at least one previously defined rule.

4. (ORIGINAL) The method of claim 2 further comprising the step of:

initiating said appropriate action before said performance problem occurring in an attempt to prevent said performance problem.

5. (PREVIOUSLY PRESENTED) The method of claim 1 wherein said evaluating of the gathered status information further includes:

correlating the gathered status information with at least one previously defined rule.

6. (ORIGINAL) The method of claim 5 wherein the at least one rule defines a known pattern for status information that foreshadows the occurrence of a performance problem.

7. (PREVIOUSLY PRESENTED) The method of claim 1 wherein said performance problem is any one or more of the problems selected from:

operability problem of one or more network elements, operability problem of the network, failure of one or more network elements, failure of the network, integrity problem of one or more network elements, integrity problem of the network, efficiency problem of one or more

network elements, efficiency problem of the network, decreased processing speed of one or more network elements, decreased processing speed of the network, usage capacity problem of one or more network elements, and usage capacity problem of the network.

8. (PREVIOUSLY PRESENTED) The method of claim 1 wherein said gathering step includes gathering status information for any one or more of:

network status, disk status, database status, memory status, CPU status, and operating system status.

9. (ORIGINAL) The method of claim 1 wherein said gathering step includes gathering status information by a plurality of distributed gateways that are communicatively coupled to a central management system.

10. (PREVIOUSLY PRESENTED) The method of claim 3 wherein said providing at least one rule includes a user defining said at least one rule.

11. (PREVIOUSLY PRESENTED) The method of claim 3 wherein said at least one rule is implemented as software code executing on a management system.

12. (PREVIOUSLY PRESENTED) The method of claim 3 further comprising:

said at least one rule correlating disparate network elements.

13. (PREVIOUSLY PRESENTED) The method of claim 3 further comprising:

said at least one rule correlating disparate characteristics of one or more network elements.

14. (PREVIOUSLY PRESENTED) The method of claim 13 wherein said disparate characteristics include those selected from:

CPU run queue capacity, CPU run queue blocks, CPU run queue waits, context switching, memory paging, swap allocation, disk writes, disk blocking, disk waiting, disk utilization, network inbound packets, network outbound packets, network errors, and network collisions.

15. (CURRENTLY AMENDED) A system for managing a network, said system

comprising:

at least one polling gateway that is operable to gather real-time status information for one or more network elements;

at least one processor-based management server communicatively coupled to the at least one polling gateway to receive the gathered real-time status information from said at least one polling gateway; and

the at least one processor-based management server predicting the occurrence of a performance problem within the network based on the gathered real-time status information.

16. (ORIGINAL) The system of claim 15 wherein said one or more network elements include a plurality of network elements distributed in the network.

17. (ORIGINAL) The system of claim 15 wherein said one or more network elements include a plurality of disparate network elements.

18. (ORIGINAL) The system of claim 15 wherein said at least one polling gateway includes a plurality of distributed polling gateways.

19. (ORIGINAL) The system of claim 15 wherein said plurality of distributed polling gateways include polling gateways that are each operable to poll particular ones of disparate network elements.

20. (ORIGINAL) The system of claim 19 wherein said disparate network elements include network elements that communicate in different protocols.

21. (PREVIOUSLY PRESENTED) The system of claim 20 wherein said disparate network elements include network elements selected from: SNMP network elements, CMIP network elements, and network elements using TCP/IP protocol.

22. (PREVIOUSLY PRESENTED) The system of claim 15 wherein at least one rule defines an appropriate action for said at least one processor-based management server to respond to a defined condition being detected.

23. (ORIGINAL) The system of claim 22 wherein said appropriate action is an

action for attempting to prevent the performance problem predicted by the detection of said defined condition from occurring.

24. (ORIGINAL) The system of claim 22 wherein upon detection of said defined condition, said at least one processor-based management server initiates said appropriate action before said performance problem occurring.

25. (PREVIOUSLY PRESENTED) The system of claim 15 wherein at least one rule defines a known pattern for status information that foreshadows the occurrence of a performance problem.

26. (PREVIOUSLY PRESENTED) The system of claim 15 wherein at least one rule defines statistical analysis of said status information that foreshadows the occurrence of a performance problem.

27. (PREVIOUSLY PRESENTED) The system of claim 15 wherein at least one rule defines a known correlation of status information that foreshadows the occurrence of a performance problem.

28. (PREVIOUSLY PRESENTED) The system of claim 15 wherein said performance problem is any one or more of the problems selected from:

operability problem of one or more network elements, operability problem of the network, failure of one or more network elements, failure of the network, integrity problem of one or more network elements, integrity problem of the network, efficiency problem of one or more network elements, efficiency problem of the network, decreased processing speed of one or more network elements, decreased processing speed of the network, usage capacity problem of one or more network elements, and usage capacity problem of the network.

29. (PREVIOUSLY PRESENTED) The system of claim 15 wherein said status information includes one or more from:

network status, disk status, database status, memory status, CPU status, and operating system status.

30. (CURRENTLY AMENDED) A management system for managing one or more

layers of a network, wherein said managing includes predicting performance problems that are to occur within one or more layers of the network and taking responsive actions in an attempt to prevent or timely respond to predicted performance problems, said management system comprising:

at least one processor-based management server communicatively coupled to at least one polling gateway that is operable to poll at least one network element to gather real-time status information for said at least one network element;

the at least one processor-based management server including software code executing thereon, wherein said software code learns a condition for predicting a performance problem within the network from said gathered real-time status information to enable the processor-based management server to predict the occurrence of a performance problem within the network.

31. (ORIGINAL) The management system of claim 30 wherein said one or more network elements include a plurality of network elements distributed in the network.

32. (ORIGINAL) The management system of claim 30 wherein said one or more network elements include a plurality of disparate network elements.

33. (ORIGINAL) The management system of claim 30 wherein said at least one polling gateway includes a plurality of distributed polling gateways.

34. (ORIGINAL) The management system of claim 30 wherein said plurality of distributed polling gateways include polling gateways that are each operable to poll particular ones of disparate network elements.

35. (ORIGINAL) The management system of claim 34 wherein said disparate network elements include network elements that communicate in different protocols.

36. (PREVIOUSLY PRESENTED) The management system of claim 35 wherein said disparate network elements include network elements selected from: SNMP network elements, CMIP network elements, and network elements using TPC/IP protocol.

37. (PREVIOUSLY PRESENTED) The management system of claim 30 wherein at least one rule defines an appropriate action for said at least one processor-based management server to take in response to said defined condition being detected.

38. (ORIGINAL) The management system of claim 37 wherein said appropriate action is an action for attempting to prevent the performance problem predicted by the detection of said defined condition from occurring.

39. (ORIGINAL) The management system of claim 37 wherein upon detection of said defined condition, said at least one processor-based management server initiates said appropriate action before said performance problem occurring.

40. (PREVIOUSLY PRESENTED) The management system of claim 30 wherein said learned condition includes a pattern for status information that foreshadows the occurrence of a performance problem.

41. (PREVIOUSLY PRESENTED) The management system of claim 30 wherein said learned condition includes statistical analysis of said status information that foreshadows the occurrence of a performance problem.

42. (PREVIOUSLY PRESENTED) The management system of claim 30 wherein said learned condition includes correlation of status information that foreshadows the occurrence of a performance problem.

43. (PREVIOUSLY PRESENTED) The management system of claim 30 wherein said performance problem is any one or more of the problems selected from:

operability problem of one or more network elements, operability problem of the network, failure of one or more network elements, failure of the network, integrity problem of one or more network elements, integrity problem of the network, efficiency problem of one or more network elements, efficiency problem of the network, decreased processing speed of one or more network elements, decreased processing speed of the network, usage capacity problem of one or more network elements, and usage capacity problem of the network.

44. (PREVIOUSLY PRESENTED) The management system of claim 30 wherein said status information includes one or more from:

network status, disk status, database status, memory status, CPU status, and operating system status.

45. (ORIGINAL) The management system of claim 30 wherein said at least one network element is represented as an object within object-oriented software executing on the processor-based server, said object having one or more attributes for which said status information may be gathered.

46. (PREVIOUSLY PRESENTED) The management system of claim 45 wherein said learned condition includes correlation of one or more attributes of one or more objects to define the prediction of a performance problem.

47. (ORIGINAL) The management system of claim 30 wherein said management system includes a business management layer.

48. (ORIGINAL) The management system of claim 47 wherein said performance problem includes a business performance problem.

49. (ORIGINAL) The management system of claim 48 wherein said at least one network element includes an electronic commerce system for processing commercial transactions with customers via the Internet, and wherein said business performance problem includes a problem resulting in inability of said electronic commerce system processing said commercial transactions.

50. (ORIGINAL) The management system of claim 30 wherein said management system includes a service management layer.

51. (ORIGINAL) The management system of claim 50 wherein said performance problem includes a service performance problem.

52. (ORIGINAL) The management system of claim 51 wherein said service performance problem includes problem with the quality provided to subscribers or clients of the managed network.

53. (ORIGINAL) The management system of claim 30 wherein said management system includes a network management layer.

54. (ORIGINAL) The management system of claim 53 wherein said performance problem includes a network performance problem.

55. (ORIGINAL) The management system of claim 30 wherein said management system includes an element management layer.

56. (ORIGINAL) The management system of claim 55 wherein said performance problem includes a network element performance problem.

57. (ORIGINAL) The management system of claim 30 wherein said management system includes a plurality of at least the following layers: business management layer, service management layer, network management layer, and element management layer, and wherein a plurality of said layers are correlated within said at least one rule.

58. (ORIGINAL) The management system of claim 30 wherein said management system includes a plurality of at least the following layers: business management layer, service management layer, network management layer, and element management layer, and wherein said performance problem is a problem within any of said plurality of layers.